

Preoperative assessment of tumours of the upper urinary tract by photon-counting computed tomography and magnetic resonance tomography

Submission date 20/03/2026	Recruitment status Recruiting	<input type="checkbox"/> Prospectively registered
		<input type="checkbox"/> Protocol
Registration date 08/06/2026	Overall study status Ongoing	<input type="checkbox"/> Statistical analysis plan
		<input type="checkbox"/> Results
Last Edited 08/06/2026	Condition category Cancer	<input type="checkbox"/> Individual participant data
		<input checked="" type="checkbox"/> Record updated in last year

Plain English summary of protocol

Not provided at time of registration

Contact information

Type(s)

Principal investigator, Scientific, Public

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Additional identifiers

Study information

Scientific Title

Photon-counting computed tomography and magnetic resonance tomography for preoperative risk stratification in upper tract urothelial carcinoma (UTUC) – a prospective trial

Acronym

PiCTURE

Study objectives

To evaluate if MRT or PCCT performed preoperatively can identify UTUC stage T2 or higher.

Ethics approval required

Ethics approval required

Ethics approval(s)

approved 28/03/2025, Etikprövningsmyndigheten (Box 2110, Uppsala, 75002, Sweden; +46 (0) 10 4750800; registrator@etikprovning.se), ref: 2025-01538-02

Primary study design

Observational

Secondary study design

Cohort study

Study type(s)**Health condition(s) or problem(s) studied**

Upper tract urothelial carcinoma (ureter or renal pelvis)

Interventions

The study is a prospective observational study at Skåne University Hospital in Malmö and the Urology Department in Helsingborg. Participating patients will undergo both MRI and PCCT during admission to the urology department, ensuring the time between examination and surgery start is less than a week. The images from MRI/PCCT and their interpretation are blinded to the surgeons and thus do not affect the surgical treatment. After surgery, the pathological tumor stage is recorded and compared with the radiologist's staging based on 1) MRI including diffusion-weighted images, 2) PCCT, and 3) the combined MDT assessment utilizing only CT urography for staging.

A special arm exists for patients receiving preoperative systemic chemotherapy as neoadjuvant or induction therapy. These patients undergo a first MRI/PCCT before starting chemotherapy and a second MRI/PCCT within a week before surgery.

Intervention Type

Procedure/Surgery

Primary outcome(s)

1. Precision of radiologists image review of MRT and PCCT for local T-stage measured using sensitivity, specificity, positive and negative predictive value in comparison to the pathologic report at evaluation after surgery

Key secondary outcome(s)

Completion date

31/12/2029

Eligibility

Key inclusion criteria

Morphological (visible on conventional computed tomography images) suspected tumour in the upper urinary tract subjected to radical nephroureterectomy or segmental ureterectomy

Healthy volunteers allowed

No

Age group

Mixed

Lower age limit

18 years

Upper age limit

100 years

Sex

All

Total final enrolment

0

Key exclusion criteria

1. Age below 18 years
2. Not possible to give informed consent
3. Contraindication for MRT and PCCT

Date of first enrolment

01/06/2026

Date of final enrolment

31/12/2029

Locations

Countries of recruitment

Sweden

Sponsor information

Organisation

Region Skåne

ROR

<https://ror.org/03sawy356>

Funder(s)

Funder type

Funder Name

Avtal om Läkarutbildning och Forskning

Funder Name

Gösta Jönsson research foundation

Funder Name

Hillevi Fries research foundation

Results and Publications

Individual participant data (IPD) sharing plan

IPD sharing plan summary

Not expected to be made available